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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,572	08/27/2003	Stephen Arrowsmith	2002M011	5952

7590 12/14/2005

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EXAMINER

COSTALES, SHRUTI S

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/649,572	Applicant(s) ARROWSMITH ET AL.	
	Examiner Chirag V. Shah	Art Unit 1714	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/27/2003</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-9, 11-15 and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Pudelski et al. (US 6,412,468 B1) in view of evidentiary reference Meinhardt et al (US 4,234,435).

In reference to claims 1-4,9 and 11-19 Pudelski discloses a lubricant oil composition for use in compression ignited (diesel) internal combustion engines and spark ignited (gasoline) internal composition engines, set forth in column 4, lines 54-64. One embodiment of the lubricant composition teaches a sulfur content of no more than 50 ppm (col. 6, lines 40-45), with a major amount of oil of lubricating viscosity (see example 1 and 2, col.22, lines 5-10), a metal-containing detergent in the range of 0.001% to 10% (col.20, lines 61-65) and ash content of up to 1.0 wt. %, and one embodiment containing up to 0.6 wt. % of ash production in lubricant oil composition (col.21, lines 6-13). The internal combustion engine teaches an exhaust gas recirculation (EGR) system (col.5, lines 50-52 and Fig.2) with a particulate trap (col.5, lines 15-18 and Fig.2).

Art Unit: 1714

With respect to the requirement of salicylate detergent as a specific embodiment of a metal containing detergent in claim 5-8, Pudelski is silent to this explicit embodiment. However, it is noted that Pudelski incorporates Meinhardt et al., US Patent 4,234,435 which encloses examples of carboxylic derivatives (col.20, lines 22-23), and in particular the use of salicylate (US 4,234,435 column 37, lines 10-12) as a detergent /dispersant additive complex. It is the examiner's position that the disclosed use of salicylate will serve as an embodiment of a metal-containing detergent in Pudelski's lubricant oil composition.

2. Claims 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Pudelski et al. (US 6,412,468 B1) in view of the evidence given by Wulff et al. (US 6,287,351 B1).

The discussion with reference to Pudelski in paragraph 1, is incorporated herein by reference.

Although Pudelski does teach that the fuel and air mixture undergoes combustion, specific mention to cooling of the compound before entering the engine combustion chamber is absent. It is the examiner's position that the "cooled" mixture of gas and/or air is an inherent property of the EGR system. This conclusion is supported by evidentiary evidence Wulff et al. (US 6,287,351 B1), which states that "one of the primary functions of an EGR system in modern vehicles is to reduce the combustion temperature by recirculating a portion of the exhaust gas..." (US 6,287,351 B1, col.2, lines 7-17).

In light of the above, it is clear that Pudelski et al anticipate the presently cited claims.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pudelski et al. (US 6,412,468 B1) in view of evidentiary reference Meinhardt et al (US 4,234,435) and Wulff et al. (US 6,287,351 B1) as applied to claims 1-9 and 11-19 above, and further in view of Jackson et al (US PGPub 2005/0115146 A1).

The discussion in paragraphs 1 and 2 above are incorporated herein by reference.

Pudelski et al discloses a compression ignition (diesel) internal combustion engine, however it is silent as to the embodiment of a Heavy Duty Diesel (HDD) engine. Jackson et al, teaches the use of an EGR system for use in spark ignited and compression ignited engines. Specific disclosure is made to include heavy-duty diesel engines (para. 23).

Given that Jackson et al is in the same field of endeavor as Pudelski et al ( e.g. lubricant oil compositions for spark and compression ignited engines) it would have been obvious for one

Art Unit: 1714

of ordinary skill to include heavy-duty diesel engines when using the lubricant composition disclosed by Pudelski et al. Especially because using a low ash lubricant composition as disclosed by Pudelski et al, in heavy duty diesel engines will reduce the amount of soot deposit.

### *Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag V. Shah whose telephone number is 571-272-2766. The examiner can normally be reached on M-F 7:30am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cv  
12/12/2005

*Vasu Jagannathan*  
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Application/Control Number: 10/649,572  
Art Unit: 1714

Page 6